

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 April 2005 (21.04.2005)

PCT

(10) International Publication Number
WO 2005/034878 A2

(51) International Patent Classification⁷: **A61K**
(21) International Application Number:
PCT/US2004/033349
(22) International Filing Date: 8 October 2004 (08.10.2004)
(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data:
60/509,882 8 October 2003 (08.10.2003) US

(71) Applicants (for all designated States except US): **PRESIDENT AND FELLOWS OF HARVARD COLLEGE** [US/US]; 17 Quincy Street, Cambridge, MA 02138 (US). **ORGANIX, INC.** [US/US]; 240 Salem Street, Woburn, MA 01801 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MADRAS, Bertha, K.** [US/US]; 32 Montrose Road, Newton, MA 02158 (US). **MELTZER, Peter, C.** [US/US]; 8 Rumford Road, Lexington, MA 02173 (US). **BUTLER, David** [US/US]; 38 Everett Street #2, Medford, MA 02155 (US).

(74) Agents: **BUTLER, Gregory, B.** et al.; Ph. D., ESQ., Edwards & angell, LLP, P.O. Box 55874, Boston, MA 02205 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **PYROVALERONE ANALOGS AND THERAPEUTIC USES THEREOF**

(57) Abstract: New compounds that bind to monoamine transporters are described. The compounds of the present invention can be racemic or pure-R- or S-enantiomers. Certain preferred compounds of the present invention have a high selectively dopamine transporter versus the serotonin transporter. Preferred monoamine transporters for the practice of the present invention include the dopamine transporter, the serotonin transporter and the norepinephrine transporter.

WO 2005/034878 A2